

Amendments to the Claims

1. (Currently Amended) An apparatus comprising:
a set of registers where each register has a corresponding to computed brightness value to store data indicating a number of pixels of an image having respective computed brightness values, each register having an associated saturation threshold value; and
an image brightness agent communicatively coupled with the set of registers to determine whether a register is saturated and, for each register that is saturated to redistribute computed brightness values to a closest non-saturated register and if none of the registers is saturated, to adjust image brightness to compensate for backlight intensity that is reduced to operate the apparatus in a low power mode, wherein the image brightness and pixel color intensity are ~~is~~
adjusted to compensate for the reduced backlight intensity based on an ambient light level.
2. (Original) The apparatus of claim 1 further comprising a color look-up table coupled with the image brightness agent, the image brightness agent to modify the color look-up table based on computed brightness values stored in the registers.
3. (Original) The apparatus of claim 2 wherein the registers store brightness histogram values.
4. (Currently Amended) The apparatus of claim 2 further comprising a backlight control agent communicatively coupled with the image brightness agent, the backlight control agent to modify backlight brightness based on modifications to the color look-up table to provide

a displayed image that is comparable in user-perceived brightness to an original image in a normal power mode.

5. (Original) The apparatus of claim 1 wherein one or more of the saturation threshold values comprises a largest number to be stored by the associated register.

6. (Original) The apparatus of claim 1 wherein one or more of the saturation threshold values comprises number less than a largest number to be stored by the associated register.

7. (Original) The apparatus of claim 1 wherein the image brightness agent comprises a processor executing sequences of instructions.

8. (Original) The apparatus of claim 1 wherein the image brightness agent comprises control circuitry communicatively coupled with the set of registers.

9. (Canceled)

10. (Previously Presented) The apparatus of claim 1 further comprising an ambient light sensor coupled with the image brightness agent to generate an indication of ambient light level.

11. (Previously Presented) The apparatus of claim 1 wherein the image brightness agent modifies a color look-up table based on the indication of ambient light level.

12. (Previously Presented) The apparatus of claim 11 further comprising a backlight control agent communicatively coupled with the set of registers and the image brightness agent to control backlight intensity in response to modifications to the color look-up table.

13. (Currently Amended) A method comprising:

- configuring a plurality of registers to accumulate pixel data in an image corresponding to a specific computed brightness value associated with the respective registers;
- processing pixels of an image to determine a specific computed brightness value of each pixel;
- incrementing a value stored in a register accumulating pixel data corresponding to a specific computed brightness value when a pixel having the specific computer brightness value is processed;
- redistributing a subset of computed brightness values corresponding to closest non-saturate registers if the computed brightness value for the register exceeds a threshold value;
- modifying pixel color intensity values corresponding to one or more portions of the image to be displayed based on the ambient light level; and
- adjusting image brightness to compensate for backlight intensity that is reduced to operate the apparatus in a low power mode, wherein the image brightness is adjusted to compensate for the reduced backlight intensity based on an ambient light level if none of the registers is saturated.

14. (Original) The method of claim 13 further comprising modifying a color look-up table based on values stored in the registers.

15. (Original) The method of claim 14 further comprising modifying a display device backlight intensity based on the modifications to the color look-up table.

16. (Original) The method of claim 13 wherein the computed brightness values correspond to brightness histogram values.

17. (Original) The method of claim 13 wherein the saturation threshold value comprises a largest number to be stored in a register.

18. (Original) The method of claim 13 wherein the saturation threshold value comprises a value less than a largest number to be stored in a register.

19. (Currently Amended) The method of claim 13 further comprising:
receiving ambient light information from an ambient light sensor and modifying a color look-up table based on the ambient light information; and
modifying a display device backlight intensity based on the modifications to the color look-up table to provide a displayed image that is comparable in user-perceived brightness to an original image in a normal power mode.

20-54. (Canceled)